

USB ADSL Modem

ADU-2120

User's Manual

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FCC Compliance Statement

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the instructions provided with the equipment, may cause interference to radio and TV communication. The equipment has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If you suspect this equipment is causing interference, if the interference disappears when you turn your Ethernet Switch off and reappears when you turn it back on, there is interference being caused by the Ethernet Switch.

You can try to correct the interference by one or more of the following measures:

- w Reorient the receiving radio or TV antenna where this may be done safely.
- w To the extent possible, relocate the radio, TV or other receiver away from the Switch.
- **w** Plug the Ethernet Switch into a different power outlet so that the Switch and the receiver are on different branch circuits.

If necessary, you should consult the place of purchase or an experienced radio/television technician for additional suggestions.

CE mark Warning

The is a class B device, In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

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Revision

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Chapter 1 Introduction

PLANET USB ADSL modem ADU-2120 is designed to provide cost-effective access to high-speed ADSL services. With our ADSL modem, surfing on Internet is just like driving a sport car on the Express Highway. Video on Demand, Videoconference and any high-speed Internet applications is not a dream any more. But a reality!

Features

- I USB bus-powered; an external power supply is not required
- I ANSI T1.413 issue 2, ITU G.dmt(G.992.1), and ITU G.lite(G.992.2) compliant
- I Software upgradeable
- I Support the following three modes
 - n PPP over ATM LLC or VCMUX (RFC 2364)
 - n PPP over Ethernet LLC or VCMUX (RFC 2516)
 - n RFC 1483 LLCSNAP/VC-MUX
 - Bridged IP over ATM, LLC or VCMUX (RFC 1483)
 - Routed IP over ATM LLC or VCMUX (RFC 1483)
- I Supports DSL downstream data rates up to 8 Mbps
- I Supports DSL upstream data rates up to 1 Mbps
- I Compliant with Universal Serial Bus Specification Revision 1.1

Data Requirement

You must get the following data information from your ISP or phone company to set up ADU-2120.

ADSLRFC1483 mode user

- I VPI/VCI value
- I Encapsulation mode(example: RFC 1483...etc.)
- I IP Address, Subnet Mask
- I Gateway, DNS related information

ADSL PPPoE/PPPoA mode user

- I VPI/VCI value
- I Encapsulation mode (example: RFC 2364, 2516...etc.)
- I Username and password for authentication

System Requirement

- I Mainboard with USB support
- I Pentium II CPU and above or compatible
- I RAM: 64M or above
- I Windows 98SE, Windows 2000, Windows ME, Windows XP, Windows 2003 Server

NOTE: For Windows XP it is recommended that your PC have at least 128 M Bytes of memory.

LED definition

Below is the front panel of ADU-2120 and its LEDs definition.



LED	Definition
USB – Red	Flashing when is attaching and configuring
USB – Green	Solid green when the connection to PC is OK and the driver
	is well installed.
ADSL – Red	Flashing when the software downloading from PC is suc-
	cessful.
ADSL - Green	Flashing when is trying to connect to ADSL DSLAM
	Solid green when is ready for dial-up connection

Chapter 2 Installation



Please refer to the following steps to complete ADU-2120 installation.

Hardware Installation

- 1. Turn on your PC
- 2. Insert the rectangular end of a USB cable into the USB port of your PC. Then, insert the square end of the USB cable into the USB port of the ADU 2120.
- 3. PC will automatically detect this modem as "DynaMiTe USB Modem".
- 4. Insert bundled USB driver CD into the proper drive and follow instruction to install ADU 2120.

Driver Installation with Windows 98

1. The "Add New Hardware Wizard" will be displayed. Click **Next**.

Add New Hardware Wiz	ard
Add New Hardware Wiz	This wizard searches for new drivers for: ADSL USB MODEM A device driver is a software program that makes a hardware device work.
	< Back Next> Cancel

2. Choose the "search for a better Driver (Recommended)" and click Next.

Add New Hardware Wiza	rd
	 What do you want Windows to do? Search for the best driver for your device. (Recommended). Display a list of all the drivers in a specific location, so you can select the driver you want.
	< <u>B</u> ack Next > Cancel

 Choose "Specify a location". Then click "Browse" to find out the driver location to install. (Assume "E" is your CD-ROM drive, the driver can be found in E:\driver\ADU-2120B) then click OK. Please then click "Next" to continue.

	 Windows Will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search. ☐ Eloppy disk drives ☐ CD-ROM drive ☐ Microsoft Windows Update ☑ Specify a location:
<i>~</i>	Browse

4. The Add New Hardware Wizard will appear and indicate the PLANET ADU-2120 USB ADSL modem has been recognized and will install a new driver. Click Next

	Construction Construction Construction Construction
	PLANET ADU-2100 USB ADSL Interface
	Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.
🗞 🍪	Location of driver.
	D:\DRIVER\WAN\CXTCB00U.INF

5. Please then go to Section "**Driver Configuration**" for further configuration.

Driver Installation with Windows ME

 The "Found New Hardware Wizard" will be displayed. Insert ADU-2120 driver CD and click Next.

Add New Hardware Wiz	ard
	Windows has found the following new hardware: ADSL USB MODEM Windows can automatically search for and install software that supports your hardware. If your hardware came with installation media, insert it now and click Next. What would you like to do? Mat would you like to do? Automatic search for a better driver (Recommended) Specify the location of the driver (Advanced)
	< Back Next > Cancel

2. Please specify the path which ADSL modem connected your computer to Internet, then click **OK**. Please select the directory with ADU-2120 driver and then click "OK".

	Location	Drive
PLANET ADU-2100 USB ADSL. PLANET ADU-2100 USB ADSL.	G:\ADU-21~1\DRIVER\LAN\CXTCB00U.INF G:\ADU-21~1\DRIVER\WAN\CXTCB00U.INF	8-22 8-22

3. Please then go to Section "Driver Configuration" for further configuration.

Driver Installation with Windows 2000

1. The "Add New Hardware Wizard" will be displayed. Please click Next.

Found New Hardware Wizard	
	Welcome to the Found New Hardware Wizard This wizard helps you install a device driver for a hardware device.
	To continue, click Next.
	< Back Next > Cancel

2. Choose the "Search for a suitable driver for my device (recommended)", and click Next.

Found New Hardware Wizard
Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.
This wizard will complete the installation for this device:
DynaMiTe USB Modem
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
What do you want the wizard to do?
 Search for a suitable driver for my device (recommended)
Display a list of the known drivers for this device so that I can choose a specific driver
< Back Next > Cancel

3. Next you will be prompted for software drivers. Select Specify a location.

Locate C	Driver Files	1
Wher	e do you want Windows to search for driver files?	ENT-
Searc	h for driver files for the following hardware device:	
Z	DynaMiTe USB Modem	
The w any ol	vizard searches for suitable drivers in its driver database on your computer and in f the following optional search locations that you specify.	
To sta insert	art the search, click Next. If you are searching on a floppy disk or CD-ROM drive, the floppy disk or CD before clicking Next.	
Optio	nal search locations:	
	Floppy disk drives	
Γ	CD-ROM drives	
V	Specify a location	
Г	Microsoft Windows Update	
	(Dark Numa) Car	

- 4. Insert the ADSL Driver CD into your systems CD-ROM drive and then click "Browse" to find out the driver location to install. (Assume "E" is your CD-ROM drive, the driver can be found in E:\driver\ADU-2120B) then click OK.
- 5. The Found New Hardware Wizard will then find the ADSL USB MODEM, click Next.

und New Hard	dware Wizard
Driver Files The wiza	Search Results rd has finished searching for driver files for your hardware device.
The wiza	rd found a driver for the following device:
2	DynaMiTe USB Modem
Windows	found a driver for this device. To install the driver Windows found, click Next.
	c:\inetpub\usb5.4.1_annex b etsi\ameusb.inf
	< Back Next > Cancel

6. The "Digital Signature Not Found" window will pop-up, Click Yes.



7. Please then go to Section "Driver Configuration" for further configuration.

Driver Installation with Windows XP

1. The "Add New Hardware Wizard" will be displayed. Choose Install from a list or specific location (Advanced) and click Next.

Found New Hardware Wizard					
	Welcome to the Found New Hardware Wizard This wizard helps you install software for: DynaMiTe USB Modem				
	If your hardware came with an installation CD or floppy disk, insert it now.				
	What do you want the wizard to do? O Install the software automatically (Recommended) Install from a list or specific location (Advanced)				
	Click Next to continue.				
	< Back Next > Cancel				

 Insert the ADSL Driver CD into your systems CD-ROM drive, select "Include this location in the search" and then click "Browse" to find out the driver location to install. (Assume "E" is your CD-ROM drive, the driver can be found in E:\driver\ADU-2120B). Click "Next" to continue.

Found New Hardware Wizard				
Please choose your search and installation options.	>			
 Search for the best driver in these locations. 				
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.				
Search removable media (floppy, CD-ROM)				
Include this location in the search:				
D:\driver\ADU-2120B Srowse				
O Don't search. I will choose the driver to install.				
Choose this option to select the device driver from a list. Windows does not guarantee th the driver you choose will be the best match for your hardware.	nat			
<pre>< Back Next > Cancel</pre>	٦			

3. The Hardware Installation window appears. Click Continue Anyway.

Har dwa	re Installation			
⚠	The software you are installing for this hardware: PLANET ADU-2120B USB ADSL Modem			
	has not passed Windows Logo testing to verify its compatibility with Windows XP. (<u>Tell me why this testing is important.</u>)			
	Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.			
	Continue Anyway STOP Installation			

4. Now please go to Step 3 for driver configuration.

Driver Configuration

Step 3: Driver Configuration

1. The system will start to copy the driver and utility files to your PC. After completing, the ADSL Modem Driver Suite installation page is shown. Click "Next" to continue.



2. The modem driver version is shown. Click "Next" to continue.

ANET Technology Corp. A	DSL Modem	Driver Suite		D
Read Instructions Carefully				PLANET
Read Me				
				<u>_</u>
Read	/le			
PLANET ADU-2120B USB AD)SL Modem, Ani	nex B (Alcatel (chipset) version 5	5.4.1 driver
anorneuu		< <u>B</u> ack	Next >]Cancel

3. On this page, you need to select the operation mode (RFC 1483, PPPoA or PPPoE) and input the VPI / VCI values per your ISP's requirement. Click "Next" to continue.

PLANET Technology Corp. ADSL Modem Driver Suite	
Driver Components	
Please select the driver type you want	
C RFC 1483	
C PPPaA	
C PPPoE	
Please enter Virtual Path Identifier and Virtual Circuit Identifier	
VPI 8 VCI 35	
Back Next	Cancel

4. Please then select the framing type your ISP uses: LLC or VCMUX/NULL.

PLANET Technology Corp. ADSL Modem Driver S	uite 🛛 🔀
Please select the framing type	
ецс	
InstallShield	
< Back	k Next > Cancel

5. If you select RFC 1483, you will then need to specified if it is Bridged or Routed RFC 1483. Your ISP should also provide this information.

PLANET Technology Corp. ADSL Modem Driver Suite	X
RFC 1483 Modes	PLANET
Please select the mode you want	
C Bridged	
C Routed	
Back Next	Cancel

6. The system will then ask you to reboot your PC. Please select "Yes, I want to restart my computer now" and click OK to finish this setup procedure.

Rebooting Machine
Setup has finished copying files to your computer. Before you can use the program, you must restart your computer.
Choose one of the following options and click OK to finish setup.
Yes, I want to restart my computer now.
O No, I will restart my computer later.
ОК

7. After reboot, the system will ask you to install the driver again. Please select "Install the software automatically" and click "Next" to continue.



8. The Hardware Installation page is shown. Please select "Continue Anyway" or Windows XP and "OK" on Windows 2000

Har dwa	re Installation
<u>!</u>	The software you are installing for this hardware: PLANET ADU-2120B USB ADSL Modem has not passed Windows Logo testing to verify its compatibility with Windows XP. (<u>Tell me why this testing is important.</u>) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	Continue Anyway STOP Installation

3. The Found New Hardware Wizard window appears and displays your newly installed PLANET ADU-2120 USB ADSL Interface, then click Finish. The system may ask you to reboot again. Please select "Yes" to reboot if asked.

Chapter 3 PPPoE and PPPoA Configuration

ADSL LAN Configuration



To configure the connection, after you have installed the appropriate driver:

Step 1. Click either the desktop icon, or the Dial-Up Networking icon to open the Connect To window. For Windows XP, please click "Start" -> "Settings" -> "Network Connections" and then click the ADSL or PPPoE on the "Dial-up" option. Step 2. Provide the following information

Step a. Supply the User Name.

Step b. Supply the Password.

Step c. Click the field for Save Password, if you want the system to remember the password.

Step d. Click DIAL to set up the connection.

NOTE: The data for the Phone number field has been furnished by your service provider.

Connect ADSL 🛛 🕐 🔀
User name: Password:
 Save this user name and password for the following users: Me only Anyone who uses this computer
Dial Cancel Properties Help

Note: There is a known issue for PPPoA in case of Windows 98 Second Edition and Windows Millennium. Extra disabled adapters may appear in Device Manager. These extra adapters do not affect the functionality of the enabled adapter. However, do not remove the disabled adapters.

Check this link for more informa-

tion .http://support.microsoft.com/default.aspx?scid=kb;EN-US;q279116

Chapter 4. User Interface

ACCESSING CSA

The User Interface to the ADSL Modem is provided by the **Control and Status Application (CSA)**. You can access the CSA by double-clicking on the CSA icon in the System Tray, located near the clock on the task bar. The icon, which appears as two monitor screens, also changes color to indicate the status of the modem (see Table 1. ICON Condition.).

If the icon does not appear in the System Tray, it can be restored by any of the following methods:

- Restart the PC.
- Click the Windows START button, then Programs, ADSL Modem Driver, and Add CSA Tray Icon.
- Go to the CONTROL PANEL and double-click the ADSL Control and Status icon.

While connected, the System Tray CSA icon provides pop-up text that gives information about the current ADSL connection. This text appears when the cursor is placed over the icon. The information displayed is:

- bytes transmitted
- bytes received
- connection rate.

Table 1. ICON Condition

Color	Condition
Black	The modem is not available.
Red	The modem is disconnected.
Blue	The modem is waiting for initialization.
Yellow	The modem is initializing.
Green	The modem is connected and functioning.

CSA USER SCREEN

ADSL Control and St	atus			? 🛛
AmeCSA Help				
PLANET				1
				- 1
- Modem Performance	-			
Transmit (Kbp	is)			
	T	1	T	1
0	0	0	0	0
Receive (Kbp	(20			
	T	т	E	
ò	ò	ó	ó	Ö
Connection	Status	AC)SL link disco	nnected
Device	Status	AI	JSL modem a	Ivaliable
Disconnect	1			Close

Modem Performance

The Modem Performance displays performance information. The primary purpose is to display the instantaneous throughput rate for both transmit and receive paths of the modem. This rate is calculated based on the poll period (generally 2 seconds) and the number of bytes passed during that time.

Transmit and Receive

The throughput is indicated through two bar graphs, each provides a maximum rate label indicating the transmit and receive bit rates currently in use. The bar graph displays peak throughput rates over the last 10-second period. Basically, the user interface records the instantaneous throughput for each poll period over the last 10 seconds, and the peak rate is displayed as the maximum value achieved over that 10-second period. This value is indicated on the throughput graph with a vertical red marker indicating the peak rate.

The user interface displays operational information about the ADSL modem, relevant when the modem is connected. When the modem is not connected, all of the non-averaged operational information are reported as zero unless otherwise CSA User Screen Connection Status noted. This means that when the modem is disconnected, these values should immediately report zero.

Connection Status

The Connection Status field changes to indicate the status of the modem connec-

tion:

ADSL link connected

ADSL link disconnected

Device Status

The **Device Status** field changes to indicate the status of the modem connection:

- ADSL Modem available
- ADSL Modem not available

Connect/ Disconnect Button

The **CONNECT/DISCONNECT** button performs the connection/disconnection operation. If the ADSL Modem is unavailable, the button is disabled. This occurs when the ADSL modem driver is disabled or fails to communicate correctly.

Close Button

The **CLOSE** button closes the main interface screen. If the main window was displayed while the system tray icon was present, then the application continues to execute - hiding the main screen. If for some reason the icon is not present, however, the application is terminated.

Help

On-line help is available through the **HELP** screens. Press the **F1** key at the CSA main screen to see the **Help** table of contents. This is available from the context menus and system tray icon menus **Help** selection.

AboutCSA

The **ABOUTCSA** button displays the product information, including the version number and date.

Chapter 5. Uninstall Modem

5

USB Modem uninstallation

USB MODEM

To uninstall the software and hardware for the USB ASDL Modem, perform the following:

Step 1. Detach the USB Modem from your computer.

Step 2. At Windows Start, click on Programs > ADSL Modem Driver > Remove ADSL Modem Driver.

Step 3. A **Question** screen asks for verification of an uninstallation. Click **YES** to continue.



Step 4. At the **Rebooting Machine** screen, click the radio button for **Yes**, **I want to restart my computer now**, and then click **OK** to complete the uninstallation. The system is restarted.



You have successfully uninstalled the software and hardware for the modem.

Chapter 6. Troubleshooting

If your internet connection is not working, the following hints may be helpful. After trying these hints, if you still can not make your connection work, it is recommended that you ask your service provider for assistance. To run troubleshooting on the system:

Step 1. Is the system tray CSA icon green? If it is not, try a restart of your PC. This may clear the problem.

Step 2. If this does not correct the problem, make the following checks:

Step a. Is your phone line connected to the wall outlet and to your modem?

Step b. For USB. Is the modem connected to the USB port?

Step 3. If the CSA icon color does not show green after performing the steps above, it is recommended to "cleanup" the installation and reinstall. "Cleanup" is a utility that can be run from the Installation CD. At the Windows **Start** button, select **Run**, click **Browse** and search for "**Cleanup.exe**" on the installation CD. Once you Run the utility, it pops up a message for restarting the system. Re-install the modem after a restart.

Step 4. If the CSA tray icon is still not showing green uninstall the modem (see "Chapter 5. Uninstall Modem") and re-install.

Step 5. If the system tray CSA icon is green, but you have problems in logging in, or connecting to, your ISP, running "Cleanup' and reinstalling may solve the problem (see "Step 3" for details).

Step 6. If still experiencing difficulties, contact your service provided for help.

Chapter 7. Abbreviations

- AAL ATM Adaptation Layer. A function performed during ATM cell processing to adapt traditional IP or Ethernet traffic for transmission through an ATM network.
- **ADSL** Asymmetric Digital Subscriber Line. A method for modulating data to achieve high bit rates over common twisted-pair copper wire.
- **ATM** Asynchronous Transfer Mode. A method of networking the uses a fixed length cell to transmit data (versus a variable length packet). The fixed length cell improved cell switch performance, hence improves end-to-end data transfer performance.
- **CBR** Constant Bit Rate. This class of service delivers ATM traffic at a consistent rate. The rate is specified during virtual circuit construction and cannot exceed the specified value.
- **CSA** Control and Status Application. Basis for this whole document. **GUI** Graphical User Interface. The Windows-based interface a user interacts with to manage and monitor the ADSL modem activity.
- **LEC** Local Exchange Carrier. The business party responsible for delivery of telephone service to a geographic region.
- **PDU** Protocol Data Unit. Similar to a data packet, a protocol data unit is simply a data packet that has some protocol processing applied to it.
- **PVC** Permanent Virtual Circuit. A virtual circuit that is defined and exists until explicitly destroyed.
- **SAR** Segmentation and Reassembly. The process of segmenting AAL PDUs into cells and reassembling received cells as AAL PDUs.
- **SVC** Switched Virtual Circuit. A virtual circuit that is dynamically created and destroyed using UNI signaling.
- **UBR** Unspecified Bit Rate. This class of service attempts to deliver ATM traffic in a 'best effort' mode, as long as the amount of bandwidth consumed by the effort does not exceed a specified peak rate.
- **UNI** User-To-Network Interface. The interface between the user endpoint equipment and the first ATM switch encountered in the network. The UNI specification suite (versions 3.0, 3.1, and 4.0) is maintained by the ATM Forum.
- VBR Variable Bit Rate. Service class attempts to deliver ATM traffic.
- VC Virtual Circuit. A data path setup across an ATM link.
- **VCI** Virtual Circuit Identifier. A 16-bit value that is included in an ATM cell header to identify the destination virtual circuit.
- **VPI** Virtual Path Identifier. An 8-bit value that is included in an ATM cell header to identify the destination virtual path.